

1 **(BSP June 26, 2000)**

2 **Masonry Materials**

3 **Concrete Masonry Units**

4 Concrete masonry units (CMU) shall conform to ASTM C 90, Grade N,
5 Type 1, with a density between 1,600 and 1,840 kilograms per cubic meter.
6 Shrinkage shall not exceed 0.065 percent.

7
8 All CMU's shall contain a water repellent admixture in accordance with the
9 admixture manufacturer's recommendations. The water repellent admixture
10 shall be "Dry-Block System" by W. R. Grace Company, or an approved
11 equal.

12
13 All CMU's shall be standard manufactured units with nominal face
14 dimensions of 205 millimeters high and 405 millimeters long. The CMU
15 block thickness shall be 205 millimeters, unless otherwise shown in the
16 Plans. Special shapes shall be provided to complete the work as shown in
17 the Plans.

18
19 CMU surface texture and color shall be as follows:

20
21 ***\$\$1\$\$***
22

23 All CMU's shall be of uniform texture and color, obtained from one source.
24 The Contractor shall submit four samples of each type of CMU block
25 specified for use on the project to the Engineer for approval.

26
27 The Contractor shall submit a certificate of compliance from the CMU
28 manufacturer to the Engineer, in accordance with Section 1-06.3, certifying
29 compliance with the specified requirements. The submittal shall include
30 test results as required from tests conducted within the previous twelve
31 months.

32
33 **CMU Grout**

34 CMU grout shall conform to ASTM C 476, with a six sack minimum mix and
35 10 mm aggregate. The CMU grout shall have a minimum 28 day
36 compressive strength of 12,400 kPa and a slump of 255 mm.

37
38 **Mortar**

39 Portland cement shall be Type 1 conforming to Section 9-01.2(1).

40
41 Masonry cement shall conform to ASTM C 91.

42
43 Aggregate shall conform to AASHTO M 45.

44
45 Hydrated lime shall conform to ASTM C 207.

46
47 Water shall conform to Section 9-25.1.

48
49 The mortar shall conform to ASTM C 270, Type S, and shall be mixed in
50 accordance with one of the following mix proportions:

51
52 Alt. 1

Alt. 2

1	Portland Cement	1 part	1/2 part
2	Masonry Cement	-	1 part
3	Hydrated Lime	1/4 to 1/2 part	-
4	Aggregate	4-1/2 parts	4-1/2 parts

6 The proportions of damp, loose aggregate for both alternative mixes
7 shall be not less than 2-1/4 times nor greater than 3 times the sum of
8 the volumes of cement and lime used.

10 The minimum compressive strength at 28 days shall be 12,400 kPa.

12 The mortar mixture shall include a water repellent integral admixture, mixed
13 in accordance with the admixture manufacturer's recommendations. The
14 water repellent integral admixture shall be "Dry-Block System" by W. R.
15 Grace Company, or an approved equal.

17 To ensure uniform color, texture, and quality, all mortar mix components
18 shall be obtained from one manufacturer for each component, and from
19 one source and producer for each aggregate.

21 **Parge Coating**

22 The parge coating applied to the top of the assembled CMU wall shall be
23 one of the following waterproof cement base coatings:

- 25 1. Thoroseal, manufactured by Thoro.
- 26 2. Fabriseal, manufactured by Fabrikem.
- 27 3. Tamoseal, manufactured by Tamms.